

CLAIMS

1. A stent assembly comprising a tubular stent, an external surface of which is provided with a fabric.
2. A stent assembly according to claim 1, wherein the fabric constitutes a reservoir to
5 hold drugs.
3. A stent assembly according to claim 1 or 2, wherein the fabric is made from a filamentary material.
4. A stent assembly according to claim 3, wherein the filamentary material includes at least one polymer.
- 10 5. A stent assembly according to claim 4, wherein the at least one polymer is selected from the group consisting of: polyurethane, polyamide, gelatine, silicone and agar.
6. A stent according to any of claims 3-5, wherein the fabric is made from a multifilament yarn.
7. A stent assembly according to any of the claims 3-5, wherein at least a portion of the
15 fabric is produced by spinning of nanofibers.
8. A stent assembly according to claim 7, wherein said portion is produced by electrospinning.
9. A stent assembly according to claim 7 or 8, wherein the diameter of the nanofibers is in the range of 2 to 4000 nanometers, such as in the range of 2 to 3000 nanometers.
- 20 10. A stent assembly according to any of claims 7-9, wherein the nanofibers are made from a polymer.
11. A stent assembly according to claim 10, wherein the nanofibers are made from a material selected from the group consisting of: nylon, fluoropolymers, polyolefins, polyimides, and polyesters.
- 25 12. A stent assembly according to any of the preceding claims, wherein the fabric has an

openness which allows the fabric to serve as a reservoir for liquid-based drugs.

13. A stent assembly according to any of the preceding claims, wherein the tubular stent comprises an assembly of radially expandable, tubular elements aligned along a common longitudinal axis and successively joined together in pairs by respective sets of linking members.

14. A stent assembly according to claim 13, wherein each tubular element exists essentially of a strip forming a zigzag corrugation.

15. A stent assembly according to any of the preceding claims, wherein the fabric completely covers the cylindrical external surface of the stent.

16. A stent assembly according to any of claims 1-14, wherein the fabric completely covers the cylindrical external surface of the stent.

17. A stent assembly according to any of the preceding claims, wherein the stent is crimped onto a balloon for expanding the stent.

18. A stent assembly according to any of the preceding claims, wherein the stent is auto-expandable.

19. A stent assembly according to claim 18, wherein the stent is made essentially from a material selected from the group consisting of: stainless steel, Phynox®, and nitinol.

20. A stent assembly according to any of claims 1-17, wherein the stent is expandable by forced expansion, the stent being made essentially from a metallic material.

21. A stent assembly according to claim 20, wherein the metallic material is selected from the group consisting of: tungsten, platinum, tantalum, gold, and stainless steel.

22. A method of manufacturing a stent assembly according to any of the preceding claims, comprising the steps of:

- manufacturing the stent;
- applying the fabric to the stent.

23. A method according to claim 22, wherein the fabric is applied to the stent in its

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unexpanded condition.

24. A method according to claim 22 or 23, wherein the fabric is applied to the stent as a finished fabric.

25. A method according to claim 22 or 23, wherein the fabric is manufactured in situ on
5 the stent by winding one or more strands of filamentary material over the stent.

26. A method according to claim 22 or 23, wherein the fabric is manufactured by spinning of nanofibers.

27. A method according to claim 26, wherein the step of spinning comprises electrospinning.

10 28. A method according to claim 26 or 27, wherein the diameter of the nanofibers is in the range of 2 to 4000 nanometers.

29. A method according to any of claims 26-28, wherein the step of spinning comprises feeding a first fiber-forming material into a nozzle for forming nanofibers by using a pressurized gas stream, and ejecting the first fiber-forming material from an exit orifice
15 of the nozzle in the form of a plurality of strands of said first fiber-forming material that solidify and form said nanofibers.

30. A method according to any of claims 26-29, wherein the nanofibers are made from a polymer.

31. A method according to claim 30, wherein the nanofibers are made from a material
20 selected from the group consisting of: nylon, fluoropolymers, polyolefins, polyimides, and polyesters.

32. A method according to any of claims 22-31, wherein the stent is manufactured from a hollow tube, in which a pattern of tubular elements and linking elements is formed.

33. A method according to any of claims 22-31, wherein the step of manufacturing the
25 stent comprises rolling up of a sheet of material to form a tube, and securing adjoining edge portions of the sheet together.

34. A method of preparing a stent assembly according to any of claims 1-21, comprising the step of providing a drug to the fabric.